



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,619	04/02/2004	Gregory J. Boss	YOR920040054US1	1056
59144 7590 06/18/2009 CAHN & SAMUELS, LLP 1100 17th STREET, NW SUITE 401 WASHINGTON, DC 20036				
EXAMINER TRUONG, CAMQUY				
ART UNIT		PAPER NUMBER		
2195				
MAIL DATE		DELIVERY MODE		
06/18/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/816,619

**Applicant(s)**

BOSS ET AL.

**Examiner**

CAMQUY TRUONG

**Art Unit**

2195

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-7, 10-15, 18-27 and 29-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-7, 10-15, 18-27 and 29-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1, 3-7, 10-15, 18-27 and 29-36 are presented for examination.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1, 3-7, 10-15, 18-27, 29-36 are rejected under 35 U.S.C 101 because they are directed to non-statutory subject matter.

Claims 1, 3-7, 10-11, 31-32, 12-15, 18-20 and 33-34 recite a method comprising steps that may be performed mentally and / or manually by human being. Thus, the method neither explicitly recites another statutory class of invention (i.e., a machine, a manufacture or a composition of matter) nor inherently requires the use of a particular machine or apparatus. Accordingly, the recited invention is nonstatutory subject matter.

Claim 21 defines "system" in the preamble and the body of the claim recites "a performance agent", "a resource allocator", "a resource identification module". A performance agent, a resource allocator, a resource identification module appear to be software module. Therefore, claim 21 and associated dependent claims 22-27, 29-30, 35-36 are non-statutory because it recites claims that comprises software per se embodiments.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 3-7, 10-11 and 21-27, 29-32 and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable Grumann et al. (U.S. 2002/0165892) in view of Gasser et al. (U.S. 6,966, 033) and further in view of Eilert et al. (U.S. 5,247,687).**

4. As to claims 1 and 21, Grumann teaches the invention substantially as claimed including: a method of allocating a plurality of computing resources among a plurality of users, comprising:

**collecting a plurality of performance data** (each of the data collection engines 121 may include one or more input mechanisms and component to collect or derive information (performance metric) from a particular source, paragraphs 43- 44);

applying a plurality of policy rules to the collected performance data (according to a user-modifiable set of rules 127, paragraph 46);

**analyzing the collected performance data to determine if there exists an actionable item** (the data analysis engine 125 determines which collected parameters are to be associated with a particular output metric, paragraph 46);

**if an actionable item exists, applying a plurality of metrics to filter the collected performance data** (if an ARM agent average response time filtered by the specific applications making up the service is collected by the data collection engine 121, the collected information may be translated into the service time output metric for that service, paragraph 54); and

**automatically allocating the computing resources from a resource allocator** (optimum allocation of these and other shared resources, paragraph 21) by at least one action based on the actionable item: upgrading a component, replacing the component, upgrading the computing resource, and replacing the computing resource.

5. Grumann does not explicitly teach applying a plurality of metrics including a job description and job level of a user to filter the performance data. However, Gasser teaches **applying a plurality of metrics including a job description** (user selects a specific performance task from the performance task menu 205-3, col. 29, lines 65-67 / the task display area 160 includes a plurality of selectable task categories 205-1 through 205-Q. The user 108 operating the graphical user interface 150 can use the input selector 203 (e.g., a mouse pointer) to select a particular task category 205 which causes the resource management process 120-2 to display the available resource tasks 208 ..., col. 15, lines 4-17) **and job level of a user** (user may select a high-level systems management operation or resource task to be applied to the selected set of hosts by choosing particular task from a resource task menu 208 to apply to the selected resource objects, col. 29, lines 61-65) **to filter the performance data** (the user

might specify to filter out and only display those data storage systems, for example, that have a low performance rating ..., col. 30, lines 6-25).

6. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Grumann to incorporate the teaching of applying a plurality of metrics including a job description and job level of a user to filter the performance data as taught by Gasser because this allow efficiently manage (e.g., monitor, configure and/or otherwise operate) such resources in this type of environment.

7. Grumann and Gasser do not explicitly teach performance data including a time percentage in which a computing resource is engaged in excessive paging activity; and automatically allocating the computing resources by at least one action based on the actionable item: upgrading a component, replacing the component, upgrading the computing resource, and replacing the computing resource. However, Eilert teaches **teach performance data including a time percentage in which a computing resource is engaged in excessive paging activity** (spending an excessive percentage of their CPU time paging, col. 6, lines 58-60) **automatically allocating the computing resources by at least one action based on the actionable item: upgrading a component, replacing the component, upgrading the computing resource, and replacing the computing resource** (most of the address spaces in the system will continue to be managed with global LRU page replacement, col. 3, lines 66-68; col. 6, lines 54-62).

8. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Grumann and Gasser to incorporate the teaching of performance data including a time percentage in which a computing resource is engaged in excessive paging activity and automatically allocating the computing resources by at least one action based on the actionable item: upgrading a component, replacing the component, upgrading the computing resource, and replacing the computing resource as taught by Eilert in order to gain the advantage of forcing programs to exhibit page referencing characteristics, so as to be able to use this information in managing working set size and job mix.

9. As to claim 22, Eilert teaches the collected performance data comprises a time percentage in which the computing resource is engaged in an excessive paging activity (spending an excessive percentage of their CPU time paging, col. 6, lines 58-60).

10. As to claims 3 and 23, Eilert teaches the collected performance data comprises a time percentage in which the computing resource is engaged in an excessive CPU utilization (spending an excessive percentage of their CPU time paging, col. 6, lines 58-60).

11. As to claims 4 and 24, Eilert teaches the collected performance data comprises a time percentage in which the computing resource is constrained by input / output devices (col. 4, lines 10-26).

12. As to claims 5 and 25, Grumann teaches the collected performance data comprises an association of a plurality of time percentages with an application process operating on the computing resource (paragraph 3).

13. As to claims 6 and 26, Grumann teaches collecting the performance data comprises logging a plurality of events occurring on the computing resource (paragraph 45).

14. As to claims 7 and 27, Eilert teaches collecting the performance data comprise logging a plurality of errors experienced by the computing resource (spending an excessive percentage of their CPU time paging, col. 6, lines 58-60).

15. As to claims 10-11, and 29-30, Gasser teaches the plurality of metrics comprise an allowable system performance of the computing resource correlated with the job description (user selects a specific performance task from the performance task menu 205-3, col. 29, lines 65-67 / the task display area 160 includes a plurality of selectable task categories 205-1 through 205-Q. The user 108 operating the graphical user interface 150 can use the input selector 203 (e.g., a mouse pointer) to select a particular task category 205 which causes the resource management process 120-2 to display the available resource tasks 208 ..., col. 15, lines 4-17) and job level of the user (user may select a high-level systems management operation or resource task to be applied to the



selected set of hosts by choosing particular task from a resource task menu 208 to apply to the selected resource objects, col. 29, lines 61-65).

16. As to claims 31-32 and 35-36, Eilert teaches a level of said excessive paging activity is determined based on the job description and job level of the user (col. 17, lines 40-65).

**17. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Steele et al. (U.S. 2004/0117476) in view of Gasser et al. (U.S. 6,966, 033).**

18. As to claim 12, Steele teaches the invention as claimed including a method for identifying an optimum allocation of a plurality of component resources and a plurality of computing resources amongst a plurality of users, the method comprising:

**specifying a set of requirements for the optimum allocation of the component resources and the computing resources** (CPU usage / disk space usage, I/O or backbone traffic per system, paragraph 57) (requirement resources of each enterprise system, claim 10, lines 15-16; paragraph 62);

**identifying a first set of metrics that indicate a performance level at which a component resources and computing resources are replaced** (performing load analysis using the collected performance metrics and pre-determined performance thresholds, claim 10, lines 22-23; paragraphs 57-58; paragraph 63);

**identifying a second set of metrics that indicate a performance level at which the component resources and the computing resources are upgraded** (performing load analysis using the collected performance metrics and pre-determined performance thresholds, claim 10, lines 22-23; paragraphs 57-58; paragraph 63);

**correlating the first set of metrics and the second set of metrics with a user's job description to create a metrics table** (store as the performance metrics databases, paragraph 57);

**invoking an automatic hardware allocation utility of a resource allocator, wherein the first set of metrics, the second set of metrics and the metrics table are made available to the automatic hardware allocation utility for consideration** (paragraph 58); and

**receiving an optimum allocation of the component resources and the computing resources from the automatic hardware allocation utility, wherein the specified set of requirements are satisfied** ( reallocate the appropriate resources, paragraph 58; paragraph 63).

19. Steele does not explicitly teach **correlating the metrics with a user's job description and job level**. However, Gasser teaches **correlating the metrics with a user's job description** (user selects a specific performance task from the performance task menu 205-3, col. 29, lines 65-67 / the task display area 160 includes a plurality of selectable task categories 205-1 through 205-Q. The user 108 operating the graphical user interface 150 can use the input selector 203 (e.g., a mouse pointer) to select a

particular task category 205 which causes the resource management process 120-2 to display the available resource tasks 208 ..., col. 15, lines 4-17) **and job level** (user may select a high-level systems management operation or resource task to be applied to the selected set of hosts by choosing particular task from a resource task menu 208 to apply to the selected resource objects, col. 29, lines 61-65).

20. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Steele to incorporate the teaching of correlating the metrics with a user's job description and job level as taught by Gasser because this allow efficiently manage (e.g., monitor, configure and/or otherwise operate) such resources in this type of environment.

21. **aims 13-15, 18-20 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steele et al. (U.S. 2004/0117476) in view of Gasser et al. (U.S. 6,966, 033), as applied to claim 12 above, and further in view of Eilert et al. (U.S. 5,247,687).**

22. to claim 13, Steele and Gasser do not explicitly teach collecting a plurality of performance data including a time percentage in which a computing resource is engaged in excessive paging activity; and wherein the collected a plurality of performance data; and wherein the collected performance data comprises an association of a plurality of time percentages with an application process operating on

the computing resource. However, Gasser collecting a plurality of performance data including a time percentage in which a computing resource is engaged in excessive paging activity; and wherein the collected performance data comprises an association of a plurality of time percentages with an application process operating on the computing resource ((spending an excessive percentage of their CPU time paging, col. 6, lines 58-6).

23. would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Steel and Gasser to incorporate the teaching of collecting a plurality of performance data including a time percentage in which a computing resource is engaged in excessive paging activity; and wherein the collected a plurality of performance data; and wherein the collected performance data comprises an association of a plurality of time percentages with an application process operating on the computing resource as taught by Eilert in order to gain the advantage of forcing programs to exhibit page referencing characteristics, so as to be able to use this information in managing working set size and job mix.

24. to claims 14-15, Steele teaches collecting the performance data comprises logging a plurality of events occurring on the computing resource (paragraph 37).

25. As to claims 18-19, Gasser teaches the plurality of metrics comprise an allowable system performance of the computing resource correlated with the job description (user

selects a specific performance task from the performance task menu 205-3, col. 29, lines 65-67 / the task display area 160 includes a plurality of selectable task categories 205-1 through 205-Q. The user 108 operating the graphical user interface 150 can use the input selector 203 (e.g., a mouse pointer) to select a particular task category 205 which causes the resource management process 120-2 to display the available resource tasks 208 ..., col. 15, lines 4-17) and job level of the user (user may select a high-level systems management operation or resource task to be applied to the selected set of hosts by choosing particular task from a resource task menu 208 to apply to the selected resource objects, col. 29, lines 61-65).

26. As to claim 20, Steele teaches:

analyzing the collected performance data to determine if there exists an actionable item (analyzed the metric, paragraph 58);

if an actionable item exists, applying a plurality of metrics to filter the collected performance data ( comparing loads on resources and determines whether an enterprise is under-utilizing or over-utilizing resource, paragraph 58); and automatically allocating the computing resources by at least one action based on the actionable item: upgrading a component, replacing the component, upgrading the computing resource, and replacing the computing resource (automatically reallocate the disk drives within its control, paragraph 58).

27. As to claims 33-34, Eilert teaches a level of said excessive paging activity is determined based on the job description and job level of the user (col. 17, lines 40-65).

***Response to the argument***

23. Applicant's arguments filed 3/10/09 for claims 1, 3-7, 10-15, 18-27 and 29-36 have been considered but are moot in view of the new ground(s) rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAMQUY TRUONG whose telephone number is (571)272-3773. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng Ai An can be reached on (703)305-9678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VAN H NGUYEN/  
Primary Examiner, Art Unit 2194

Camquy Truong  
June 17, 2009